



US009203988B2

(12) **United States Patent**  
**Hara**

(10) **Patent No.:** **US 9,203,988 B2**  
(45) **Date of Patent:** **Dec. 1, 2015**

(54) **IMAGE FORMING APPARATUS AND IMAGE FORMING SYSTEM**

(56) **References Cited**

U.S. PATENT DOCUMENTS

- (71) Applicant: **KYOCERA DOCUMENT SOLUTIONS INC.**, Osaka (JP)
- (72) Inventor: **Hiroyuki Hara**, Osaka (JP)
- (73) Assignee: **KYOCERA Document Solutions, Inc.**, Osaka (JP)
- (\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

7,295,543	B2 *	11/2007	Kikuchi et al.	370/338
7,756,106	B2 *	7/2010	Nakao et al.	370/352
7,966,625	B2 *	6/2011	Gilfix et al.	719/330
8,949,854	B2 *	2/2015	Ramanathan et al.	719/311
2005/0018657	A1 *	1/2005	Nakao et al.	370/352
2005/0058143	A1 *	3/2005	Kikuchi et al.	370/401
2007/0136422	A1 *	6/2007	Ohtani et al.	709/204
2007/0189258	A1 *	8/2007	Kikuchi et al.	370/338
2008/0104238	A1 *	5/2008	Gilfix et al.	709/225
2008/0198986	A1 *	8/2008	Tonegawa	379/100.17
2012/0106400	A1 *	5/2012	Rahman	370/259
2012/0185573	A1 *	7/2012	Ramanathan et al.	709/219
2012/0262757	A1 *	10/2012	Ohuchi et al.	358/1.15

(21) Appl. No.: **14/297,947**

FOREIGN PATENT DOCUMENTS

(22) Filed: **Jun. 6, 2014**

JP 2012-090025 A 5/2012

(65) **Prior Publication Data**

US 2014/0376041 A1 Dec. 25, 2014

\* cited by examiner

*Primary Examiner* — Marcus T Riley

(74) *Attorney, Agent, or Firm* — Studebaker & Brackett PC

(30) **Foreign Application Priority Data**

Jun. 21, 2013 (JP) ..... 2013-130819

(57) **ABSTRACT**

An image forming apparatus includes a SIP controlling section, a web screen obtaining section, a display device, a first web controlling section, and a second web controlling section. The SIP controlling section establishes a connection with another image forming apparatus on the reception side, by communicating with a SIP server. The web screen obtaining section obtains information about a web screen by making a request to a web server. The first web controlling section executes the application on the basis of the operation performed on the web screen displayed by the display device and transmits/receives image data to/from the image forming apparatus on the reception side through the connection. The second web controlling section executes the application on the basis of the operation performed on the web screen displayed by the display device and transmits/receives audio data to/from the image forming apparatus on the reception side through the connection.

(51) **Int. Cl.**

**G06F 3/12** (2006.01)  
**H04N 1/00** (2006.01)  
**H04L 29/06** (2006.01)  
**H04L 29/08** (2006.01)

(52) **U.S. Cl.**

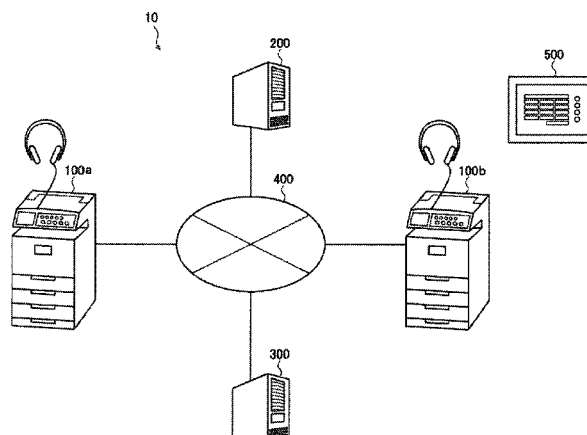
CPC ..... **H04N 1/00312** (2013.01); **H04L 65/1006** (2013.01); **H04L 65/1069** (2013.01); **H04L 67/02** (2013.01); **H04N 1/001** (2013.01); **H04N 1/00244** (2013.01); **H04N 1/00464** (2013.01); **H04N 2201/0094** (2013.01)

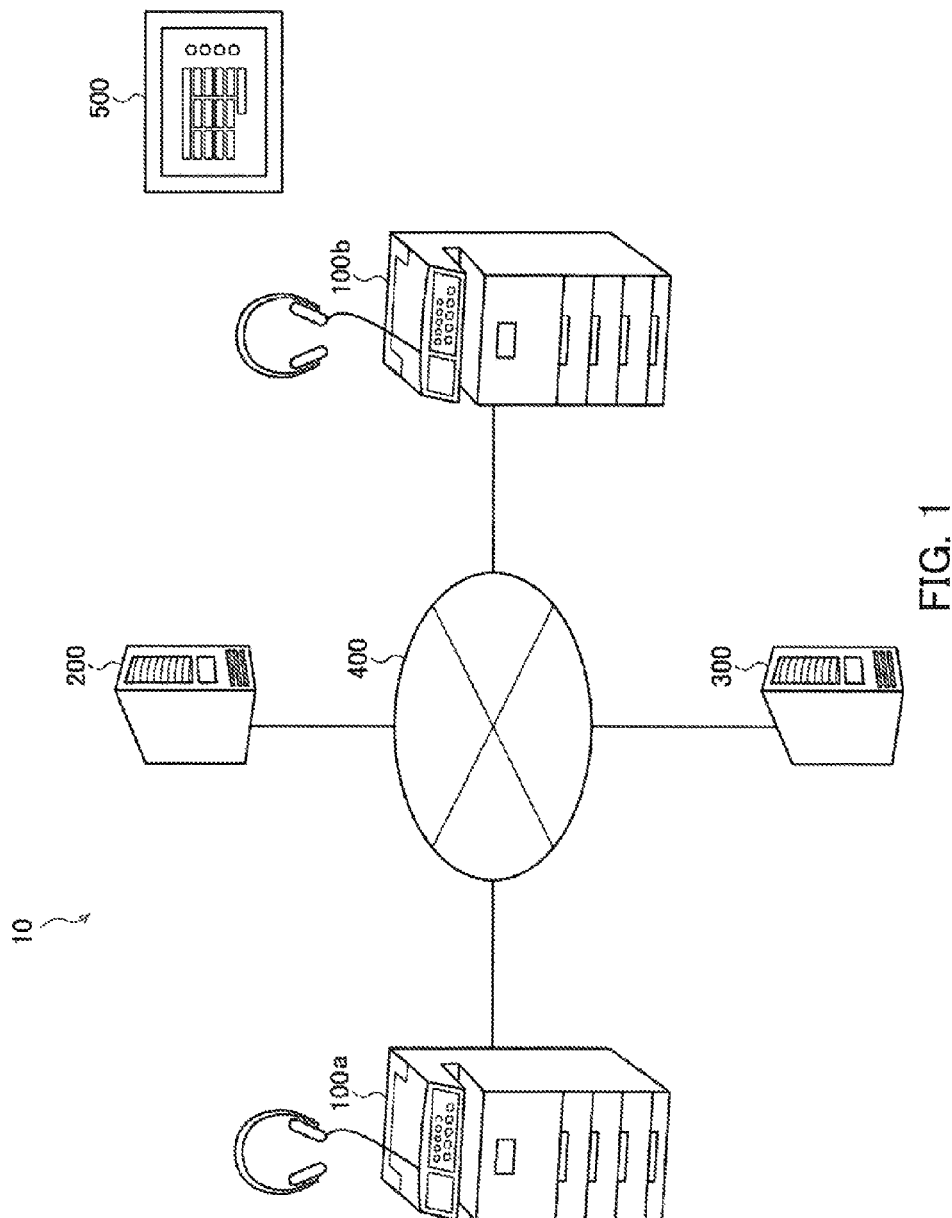
(58) **Field of Classification Search**

None

See application file for complete search history.

**13 Claims, 6 Drawing Sheets**





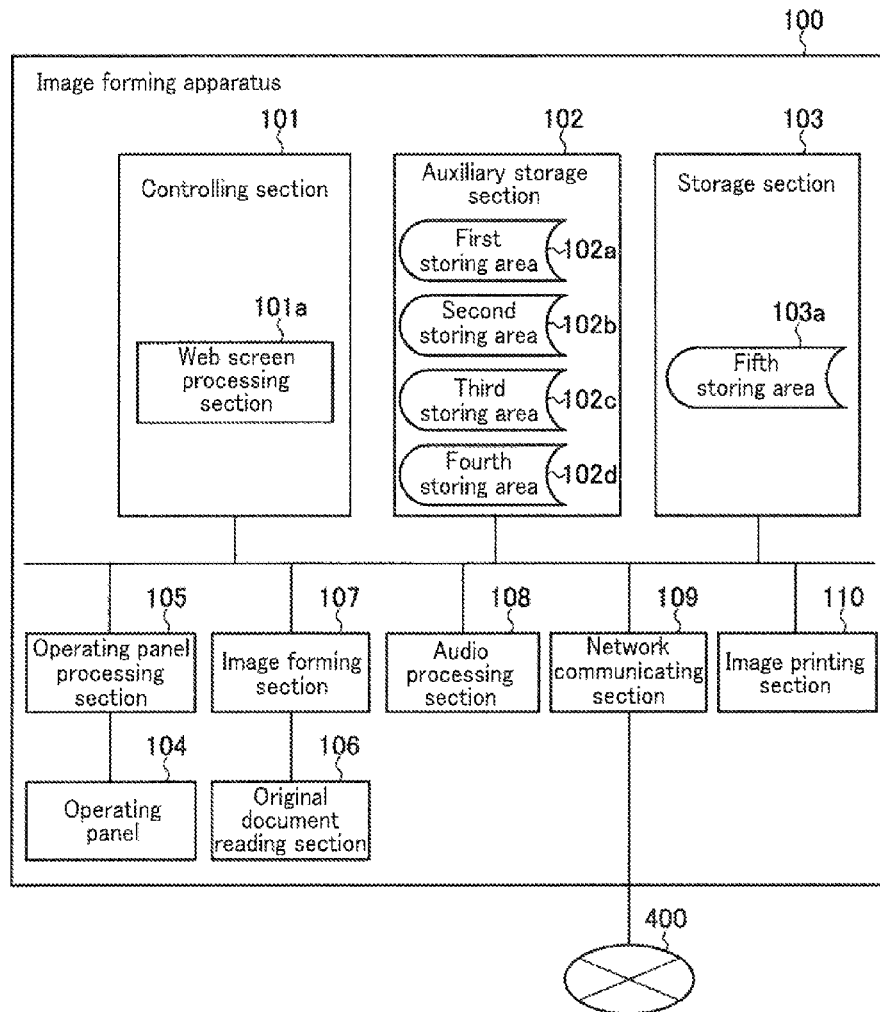


FIG. 2

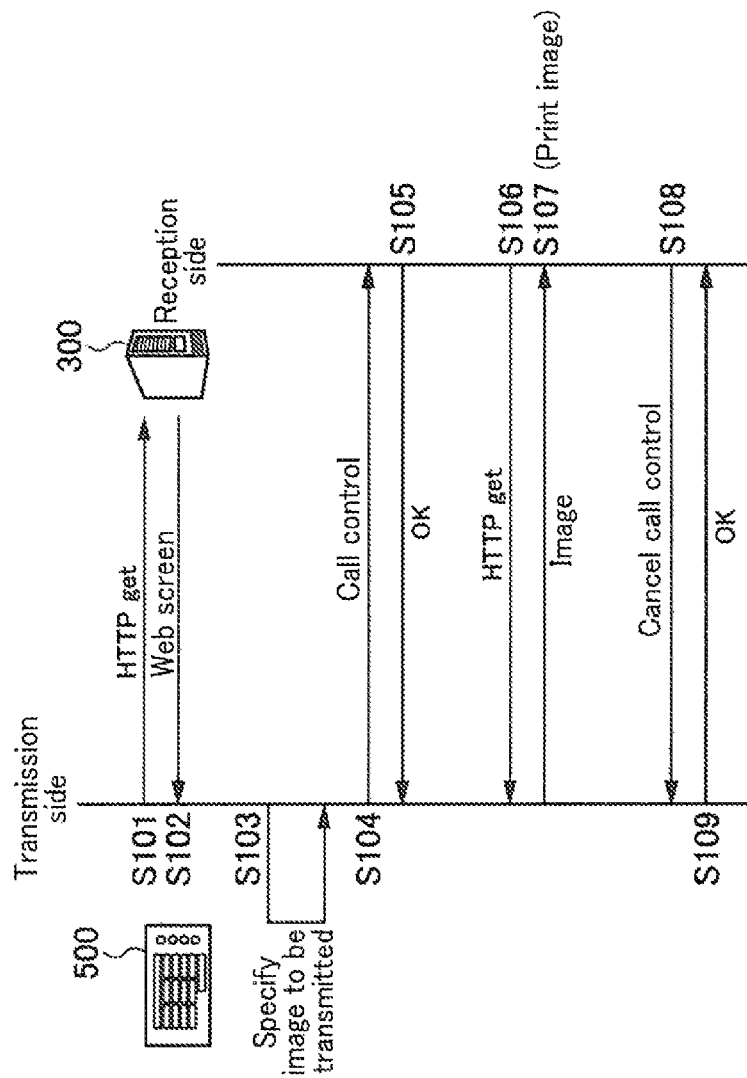


FIG. 3

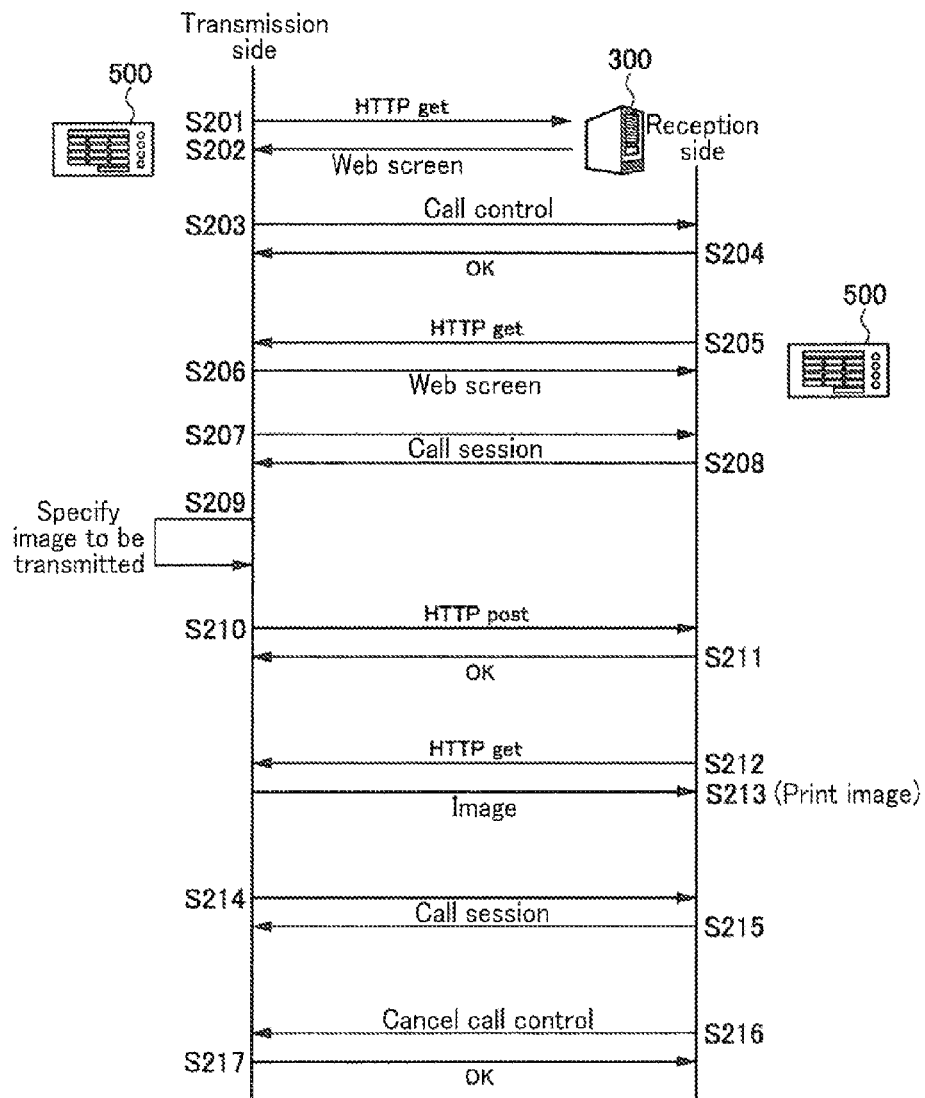


FIG. 4

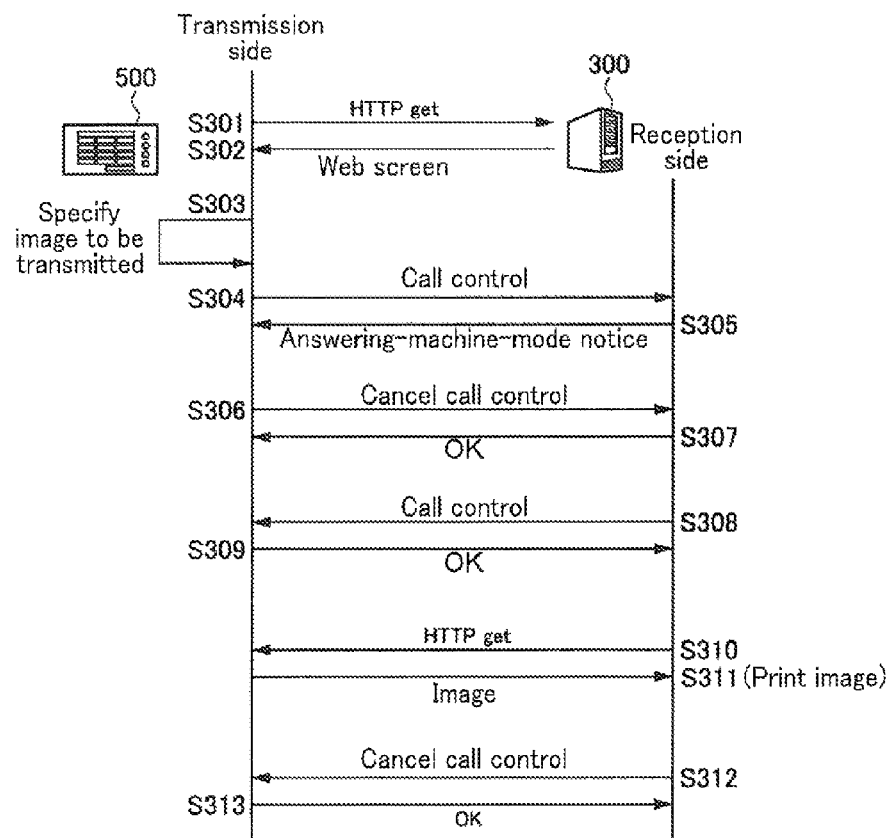


FIG. 5

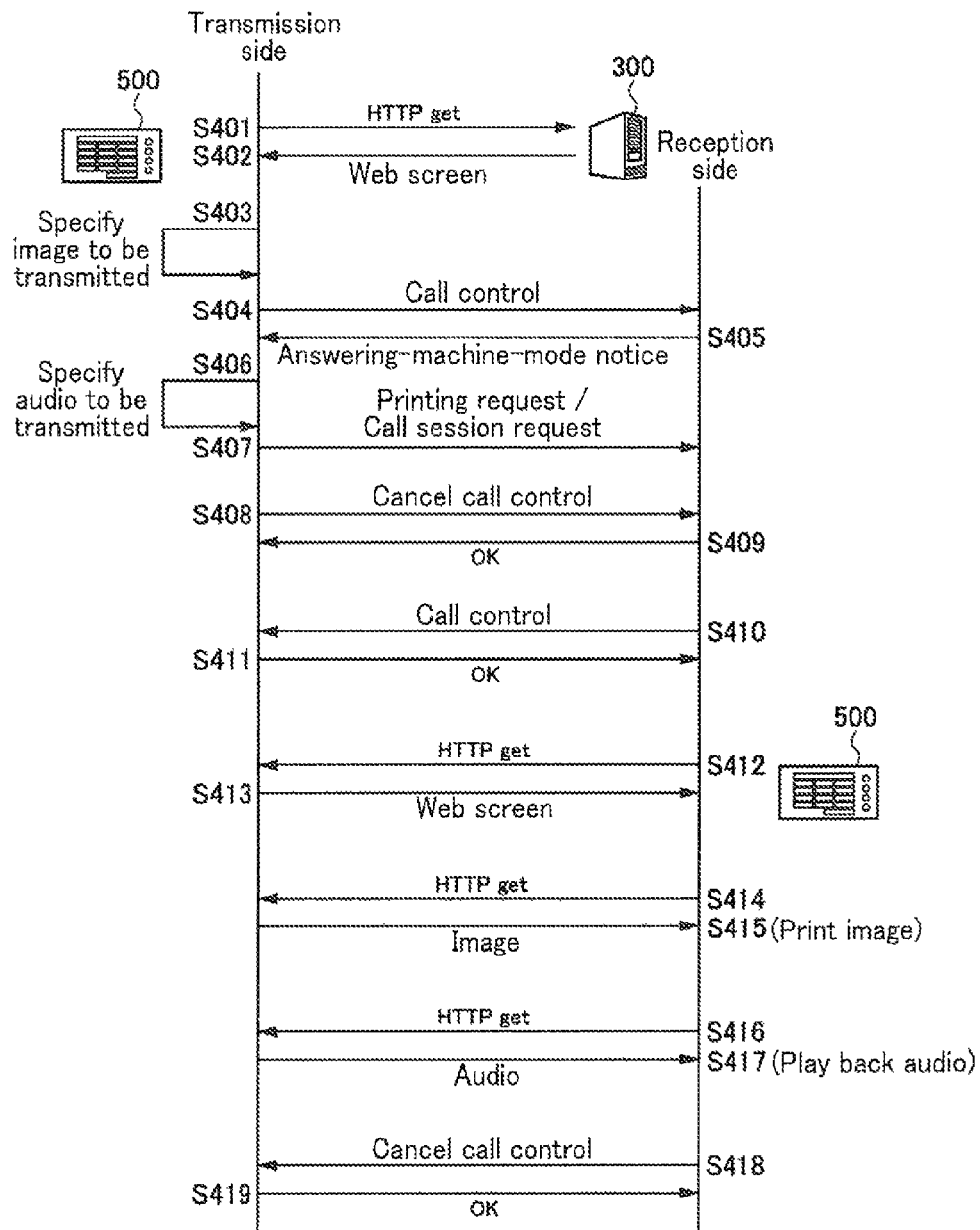


FIG. 6

# IMAGE FORMING APPARATUS AND IMAGE FORMING SYSTEM

## INCORPORATION BY REFERENCE

The present application claims priority under 35 U.S.C. §119 to Japanese Patent Application No. 2013-130819, filed Jun. 21, 2013. The contents of this application are incorporated herein by reference in their entirety.

## BACKGROUND

The present disclosure relates to an image forming apparatus that performs communication involving images and audio according to the Session Initiation Protocol (SIP) and an image forming system that includes the image forming apparatus.

Examples of image forming apparatuses that are known include printers and multifunction peripherals (MFPs). Some MFPs have both a facsimile (fax) function and a telephone function.

However, many of the MFPs described above are configured in such a manner that the telephone function and the fax function cannot be used at the same time. When using an MFP configured in such a manner, if the user wishes to use the fax function (e.g., transmit/receive image data to/from the party with which the user is having a call session), while using the telephone function (e.g., during the call session), it is considered to be necessary to stop the call session first so as to disconnect the telephone connection and to subsequently establish a fax connection. Further, it is considered that, when the transmission/reception of the image data using the fax function has been finished, it is necessary to disconnect the fax connection before establishing a telephone connection again.

To enable the user, even during a call session, to transmit/receive image data by using the fax function to/from a party with which the user is having the call session, a communication system as follows has been proposed: In this communication system, an MFP and a telephone machine are connected to a gateway apparatus. Further, the gateway apparatus is connected to another gateway apparatus via a SIP server. In the communication system configured in this manner, it is considered to be possible to transmit/receive image data by employing the MFP connected to the gateway apparatus to which the telephone machine is connected, while the user is having a call session on the telephone machine.

## SUMMARY

An image forming apparatus of the present disclosure includes a SIP controlling section, a web screen obtaining section, a display device, a first web controlling section, and a second web controlling section. The SIP controlling section is configured to establish a connection with another image forming apparatus on the reception side, by communicating with a SIP server. The web screen obtaining section is configured to obtain information about a web screen by making a request to a web server, the web screen being used for receiving an operation to execute an application in the web server. The display device is configured to display the web screen. The first web controlling section is configured to execute the application on the basis of the operation performed on the web screen displayed by the display device and to transmit/receive image data to/from the image forming apparatus on the reception side through the connection. The second web controlling section is configured to execute the application on

the basis of the operation performed on the web screen displayed by the display device and to transmit/receive audio data to/from the image forming apparatus on the reception side through the connection.

An image forming system of the present disclosure includes an image transmitting apparatus, an image forming apparatus, a SIP server, and a web server. The SIP server includes a connection establishing section configured to establish a connection between the image transmitting apparatus and the image forming apparatus. The web server includes: an image transmitting/receiving section configured to transmit/receive image data through the connection; and an audio transmitting/receiving section configured to transmit/receive audio data through the connection. The image transmitting apparatus includes: a SIP controlling section configured to establish the connection by giving an instruction to the connection establishing section; a first web controlling section configured to transmit the image data to the image forming apparatus by giving an instruction to the image transmitting/receiving section; and a second web controlling section configured to transmit the audio data to the image forming apparatus by giving an instruction to the audio transmitting/receiving section.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a drawing of a configuration of an image forming system according to an embodiment of the present disclosure;

FIG. 2 is a diagram showing a functional configuration of an image forming apparatus included in the image forming system shown in FIG. 1;

FIG. 3 is a chart showing a procedure in a print requesting process according to the embodiment of the present disclosure;

FIG. 4 is a chart showing a procedure in a print requesting process performed during a call session according to the embodiment of the present disclosure;

FIG. 5 is a chart showing a procedure in a print requesting process performed while an answering machine mode is on according to the embodiment of the present disclosure; and

FIG. 6 is a chart showing a procedure in a print requesting process and a call session requesting process that are performed while the answering machine mode is on, according to the embodiment of the present disclosure.

## DETAILED DESCRIPTION

The following describes embodiments of the present disclosure. First, a configuration of an image forming system 10 according to an embodiment will be explained, with reference to FIG. 1.

As shown in FIG. 1, the image forming system 10 includes image forming apparatuses 100a and 100b, a SIP server 200, a web server 300, and a network 400. In the explanation below, when the image forming apparatuses 100a and 100b do not need to be distinguished from each other (when the characteristics thereof in common, for example, are described), each of the image forming apparatuses 100a and 100b will be referred to as an image forming apparatus 100.

For example, each of the image forming apparatuses 100 may be a printer or a multifunction peripheral (MFP). Each of the image forming apparatuses 100 has a SIP communication function. Each of the image forming apparatuses 100 is capable of both transmitting/receiving image data and transmitting/receiving audio data through a single connection (hereinafter, "SIP connection") that is established on the basis of the SIP communication function.



For example, when the image forming apparatus **100a** is to communicate with the image forming apparatus **100b**, the image forming apparatus **100a** communicates with the SIP server **200** so that a connection (a SIP connection) with the image forming apparatus **100b** is established. When the SIP connection has been established, the image forming apparatus **100a** and the image forming apparatus **100b** are able to communicate with each other by using at least one type of protocol selected from among the T.38 protocol, the Real-time Transport Protocol (RTP), the Hypertext Transfer Protocol (HTTP), and the File Transfer Protocol (FTP). T.38 is a protocol that specifies a real-time Group 3 facsimile communication procedure in an Internet Protocol (IP) network. RTP is a data transfer protocol used for transmitting a data stream containing audio or moving pictures in a real-time manner.

The SIP server **200** includes a connection establishing section that establishes the connection (the SIP connection) between the image forming apparatus **100a** and the image forming apparatus **100b**. In response to a request from one of the image forming apparatuses **100a** and **100b**, the connection establishing section establishes the SIP connection by exercising call control according to SIP on the other of the image forming apparatuses **100a** and **100b**. More specifically, the connection establishing section brings the Internet Protocol (IP) address of the image forming apparatus **100a** into correspondence with an IP address of the image forming apparatus **100b**. Further, in response to a request from one of the image forming apparatuses **100a** and **100b**, the connection establishing section disconnects the SIP connection by performing a call control cancelling process according to SIP on the other of the image forming apparatuses **100a** and **100b**.

Via the network **400**, the web server **300** provides the image forming apparatuses **100** with an application (hereinafter, "web application") that is executable by the image forming apparatuses **100**. The web application includes an image transmitting/receiving section that transmits/receives image data through a SIP connection and an audio transmitting/receiving section that transmits/receives audio data through a SIP connection. The web application is not downloaded into the image forming apparatuses **100**. Each of the image forming apparatuses **100** is able to execute the application (the web application) in the web server **300** via the network **400**, on the basis of an operation performed on a web screen **500**.

The web server **300** includes a web screen transmitting section that transmits information about the web screen **500** to each of the image forming apparatuses **100**. The web screen **500** is a screen used for receiving the operation to execute the application in the web server **300**. The web screen **500** is provided for each of the image forming apparatuses **100** from the web server **300** and is displayed by a display device (e.g., an operating panel **104** described below) of each of the image forming apparatuses **100**. For example, when the image forming apparatus **100a** and the image forming apparatus **100b** communicate with each other, the display device of the image forming apparatus **100a** and the display device of the image forming apparatus **100b** display mutually the same web screen **500** (i.e., a synchronized screen). By performing an operation on the web screen **500**, the user is able to instruct the image transmitting/receiving section of the web application to transmit or receive image data and is able to instruct the audio transmitting/receiving section of the web application to transmit or receive audio data.

The network **400** is an IP network such as the Internet or an intranet, for example. The image forming apparatuses **100a**

and **100b**, the SIP server **200**, and the web server **300** are connected so as to be able to communicate with one another via the network **400**.

Next, a configuration of the image forming apparatuses **100** will be explained, primarily with reference to FIG. 2.

As shown in FIG. 2, each of the image forming apparatuses **100** includes a controlling section **101**, an auxiliary storage section **102**, a storage section **103**, the operating panel **104**, an operating panel processing section **105**, an original document reading section **106**, an image forming section **107**, an audio processing section **108**, a network communicating section **109**, and an image printing section **110**. The controlling section **101**, the auxiliary storage section **102**, the storage section **103**, the operating panel processing section **105**, the image forming section **107**, the audio processing section **108**, the network communicating section **109**, and the image printing section **110** each have an Input/Output (I/O) port of any of various types and are connected by a bus or the like so as to be able to communicate with one another. Further, each of the image forming apparatuses **100** includes an interface such as a Universal Serial Bus (USB), a bus controller, and the like. Further, the controlling section **101** is capable of controlling the functional elements that are connected thereto so as to be able to communicate therewith.

The network communicating section **109** includes a Local Area Network (LAN) interface that is detachable. The image forming apparatus **100** is connected to the network **400** via the network communicating section **109**. The LAN interface has a function of performing intelligent communication on the basis of various types of network protocols such as the Transmission Control Protocol/Internet Protocol (TCP/IP), AppleTalk, or the Server Message Block (SMB) protocol.

The operating panel **104** has both functions of an input device and functions of a display device. The operating panel **104** is configured with, for example, a touch panel. The operating panel **104** displays an operating menu and receives an operation from the user's finger. The operating panel **104** displays the web screen **500** and the like. In place of the touch panel, an input device such as a mouse or a keyboard and a display device such as a Liquid Crystal Display (LCD) or an Electroluminescence Display (ELD) may be used.

The operating panel processing section **105** causes the operating panel **104** to display a predetermined screen (e.g., operating items representing functions with which the image forming apparatus **100** is provided) and processes data (operating data) input by the user by operating the operating panel **104**. Further, according to an instruction from a web screen processing section **101a**, the operating panel processing section **105** causes the operating panel **104** to display the web screen **500**.

The controlling section **101** includes a processor, a Read-Only Memory (ROM) and a Random Access Memory (RAM). The processor may be, for example, a Micro Processing Unit (MPU) or a Central Processing Unit (CPU). The processor of the controlling section **101** is capable of executing any of computer programs (hereinafter, "programs") stored in the ROM, the auxiliary storage section **102**, and the storage section **103**.

The controlling section **101** includes: a web screen obtaining section that obtains the information about the web screen **500** by making a request to the web server **300**; and a web screen transmitting section that transmits the information about the web screen **500** obtained from the web server **300** to another image forming apparatus.

The controlling section **101** causes the operating panel **104** to display the web screen **500**. More specifically, the controlling section **101** includes the web screen processing section

5

**101a.** The web screen processing section **101a** transmits the request for the web screen **500** to the web server **300** and causes the operating panel **104** to display the received web screen **500**.

The controlling section **101** includes a SIP controlling section that establishes the SIP connection by communicating with the SIP server **200**. In the present embodiment, the web screen processing section **101a** corresponds to the SIP controlling section. More specifically, the web screen processing section **101a** executes the web application on the basis of an operation performed on the web screen **500** and instructs the connection establishing section included in the SIP server **200** to establish or disconnect the SIP connection.

Further, the web screen processing section **101a** executes the web application (more specifically, the image transmitting/receiving section) on the basis of an operation performed on the web screen **500** displayed by the operating panel **104** and transmits or receives the image data through the SIP connection. Further, the web screen processing section **101a** executes the web application (more specifically, the audio transmitting/receiving section) on the basis of an operation performed on the web screen **500** displayed by the operating panel **104** and transmits or receives the audio data through the SIP connection. In the present embodiment, the web screen processing section **101a** corresponds to the first web controlling section and to the second web controlling section.

The controlling section **101** further includes a print requesting section that requests another image forming apparatus to perform a printing process; a call session requesting section that requests another image forming apparatus to have a call session; an audio recording controlling section that controls operations related to recording of audio; and a print/call session controlling section that controls printing of image data and playing back of audio data. Further, the controlling section **101** further includes: an answering-machine-mode setting section that turns the answering machine mode on; and an answering-machine-mode notifying section that, when having received a call session request from another image forming apparatus while the answering machine mode is on, transmits an answering-machine-mode notice indicating that nobody is available to answer the telephone call and thus the answering machine mode is on, to the requesting image forming apparatus. The audio recording controlling section performs an audio recording process when having received the answering-machine-mode notice.

The original document reading section **106** reads an original document placed on a copy holder of the image forming apparatus **100**. When the user has instructed the image forming apparatus **100** to read the original document via the operating panel **104**, information (a reading request) indicating that the instruction was issued is sent to the original document reading section **106**. When having received the reading request, the original document reading section **106** reads the original document placed on the copy holder and generates image data corresponding to the original document.

The image forming section **107** converts the image data generated by the original document reading section **106** into a data format that is transmittable by fax or by electronic mail (e-mail) or into a data format that is printable.

The audio processing section **108** converts an electric signal (e.g., an analog signal) that has been input thereto from an audio input device (e.g., a microphone) into predetermined audio data (e.g., a digital signal) by performing a predetermined signal processing process (e.g., an analog/digital conversion process, a noise cancelling process, a compressing process, and/or the like) thereon. Further, the audio processing section **108** converts audio data (e.g., a digital signal) into

6

a predetermined electric signal (e.g., an analog signal) by performing a predetermined signal processing process (e.g., a digital/analog conversion process, a restoring process, and/or the like) thereon and outputs the electric signal to an audio output device (e.g., a speaker or earphones).

The audio processing section **108** converts audio into predetermined audio data and records the audio data (into, for example, a third storing area **102c**, which is explained later). Further, the audio processing section **108** plays back audio data stored in the auxiliary storage section **102** or the storage section **103**. For example, when having received the information (the answering-machine-mode notice) indicating that the answering machine mode is turned on, the audio processing section **108** starts a predetermined audio recording operation. During the audio recording operation, the audio processing section **108** converts an electric signal that has been input thereto from an audio input device, for example, into predetermined audio data by performing a predetermined signal processing process thereon and stores the audio data into the auxiliary storage section **102** (more specifically, the third storing area **102c**, which is explained later). The audio processing section **108** ends the audio recording operation when, for example, a predetermined period of time has elapsed since the start of the audio recording operation.

The image printing section **110** receives a request to perform a printing process (hereinafter, "printing request") and printing conditions (an image to be printed, one side/both sides, the number of copies, and so on) from the user and prints the image on copy paper or the like according to the received printing conditions. If no printing conditions are specified by the user, the image printing section **110** prints the image by using predetermined printing conditions.

The auxiliary storage section **102** stores therein programs or data that are processable by a computer. The auxiliary storage section **102** may be configured with, for example, a flash memory. The auxiliary storage section **102** stores therein, for example, a program or data of processes executed by the controlling section **101**. In the auxiliary storage section **102**, a first storing area **102a**, a second storing area **102b**, the third storing area **102c**, and a fourth storing area **102d** are provided.

The first storing area **102a** (a web screen information storing area) stores therein the information about the web screen **500**. The web screen **500** is used for executing the application provided for each of the image forming apparatuses **100** from the web server **300**.

The second storing area **102b** (a transmitted image storing area) stores therein image data to be transmitted to another image forming apparatus. For example, when the image forming apparatus **100a** transmits image data to the image forming apparatus **100b** and requests the image forming apparatus **100b** to print the image data, the image data is temporarily stored in the second storing area **102b** of the image forming apparatus **100a**.

The third storing area **102c** (a recorded audio storing area) stores therein audio data to be transmitted to another image forming apparatus. For example, when the image forming apparatus **100b** is set in the answering machine mode, audio data recorded by the image forming apparatus **100a** is stored in the third storing area **102c** of the image forming apparatus **100a**.

The fourth storing area **102d** (an answering machine information storing area) stores therein information related to the answering machine mode. For example, when a printing request or a call session request is made by the image forming apparatus **100a** while the image forming apparatus **100b** is set in the answering machine mode, information (a received-call

history) indicating that the request was made is stored in the fourth storing area **102d** of the image forming apparatus **100b**.

The storage section **103** stores therein data or programs that are processable by a computer. The storage section **103** may be configured with, for example, a hard disk drive. The storage section **103** includes a fifth storing area **103a** (an original document image data storing area). The fifth storing area **103a** stores therein, for example, the image data converted into the predetermined data format by the image forming section **107** and the image data or the audio data received by the network communicating section **109**.

Next, the printing request and a process related to a printing process performed on the basis of the printing request in the image forming system **10** will be explained, primarily with reference to FIG. 3.

For example, when the image forming apparatus **100a** requests the image forming apparatus **100b** to perform a printing process, the image forming apparatus **100a** transmits image data to the image forming apparatus **100b**. Further, the image forming apparatus **100b** receives the image data transmitted from the image forming apparatus **100a** and prints the received image data. In the example illustrated in FIG. 3, when the call control for establishing a SIP connection is exercised on the image forming apparatus **100b**, the print requesting section of the image forming apparatus **100a** (the controlling section **101**) requests the image forming apparatus **100b** to perform a printing process.

More specifically, the image forming apparatus **100a**, which is on the transmission side, performs the following process: First, when the user instructs via the operating panel **104** that the web screen **500** should be displayed, information (a display request) indicating that the instruction was issued is sent to the operating panel processing section **105**, and the display request is further sent from the operating panel processing section **105** to the controlling section **101**. When having received the display request, the controlling section **101** activates the web screen processing section **101a**. After that, as a result of activating the web screen processing section **101a**, a predetermined print requesting process is performed. The print requesting process is performed by, for example, executing the application (the web application) in the web server **300** via the web screen **500**. The print requesting process performed by the image forming apparatus **100a** on the transmission side will be explained below, primarily with reference to FIG. 3.

During the print requesting process mentioned above, first at step **S101**, by transmitting an HTTP get command (hereinafter, "HTTP get") to the web server **300**, the web screen processing section **101a** requests the web server **300** to transmit the web screen **500**. When having received the request, the web server **300** transmits the web screen **500** to the image forming apparatus **100a**.

After that, at step **S102**, the web screen processing section **101a** receives the web screen **500** from the web server **300** and causes the operating panel **104** to display the received web screen **500**.

Subsequently, at step **S103**, the user operates (touches) the web screen **500** (hereinafter, "transmission-side web screen **500**") displayed by the operating panel **104** of the image forming apparatus **100a**, so as to take out desired image data (image data to be printed) from the second storing area **102b** of the auxiliary storage section **102** and to store the image data into a transmission box of the web application (e.g., a predetermined storage area in the web server **300** or a predetermined storage area in the image forming apparatus **100a**).

After that, at step **S104**, the user operates (touches) the transmission-side web screen **500**, so that call control accord-

ing to SIP is exercised on the image forming apparatus **100b**, which is on the reception side. In the example illustrated in FIG. 3, the call control corresponds to the printing request.

Next, a printing process performed by the image forming apparatus **100b** on the reception side will be explained, primarily with reference to FIG. 3. The image forming apparatus **100b** performs the printing process explained below, in response to the printing request (more specifically, the call control) mentioned above.

When the call control according to SIP described above is exercised, the image forming apparatus **100b** (the controlling section **101**) obtains an IP address of the image forming apparatus **100a** on the transmission side. Subsequently, at step **S105**, the image forming apparatus **100b** (the controlling section **101**) transmits "OK" to the image forming apparatus **100a**, as a response to the call control. As a result, a SIP connection is established, and SIP terminals (the image forming apparatuses **100a** and **100b**) are thus able to perform peer-to-peer communication with each other through the SIP connection.

After that, at step **S106**, by using an "HTTP get", the image forming apparatus **100b** (the controlling section **101**) requests the image forming apparatus **100a** to transmit image data. When having received the request, the image forming apparatus **100a** transmits the image data (the specified image data) stored in the transmission box used in the web application, to the image forming apparatus **100b** through the SIP connection.

When the network communicating section **109** of the image forming apparatus **100b** has received the image data, the received image data (the specified image data) is sent from the network communicating section **109** to the image printing section **110** at step **S107**. When having received the image data, the image printing section **110** prints the received image data by using predetermined conditions.

Next, a process performed after the printing process described above will be explained, primarily with reference to FIG. 3.

When the printing process described above has finished, the image forming apparatuses **100a** and **100b** each perform a call control cancelling process. More specifically, at step **S108**, the image forming apparatus **100b** performs the call control cancelling process according to SIP on the image forming apparatus **100a**. Subsequently, at step **S109**, the image forming apparatus **100a** transmits "OK" to the image forming apparatus **100b**, as a response to the call control cancelling process. As a result, the SIP connection is disconnected, and the peer-to-peer communication between the SIP terminals (the image forming apparatuses **100a** and **100b**) is ended.

Next, a printing request during a call session and a process related to a printing process performed on the basis of the printing request in the image forming system **10** will be explained, primarily with reference to FIG. 4.

For example, when the image forming apparatus **100a** currently having a call session requests the image forming apparatus **100b** with which the image forming apparatus **100a** is having the call session to perform a printing process, the image forming apparatus **100a** transmits image data to the image forming apparatus **100b** during the call session (without disconnecting the connection of the call session). Thus, the image forming apparatus **100b** receives the image data transmitted from the image forming apparatus **100a** during the call session (without disconnecting the connection of the call session) and prints the received image data. In the example illustrated in FIG. 4, when the image forming apparatus **100b** has received a printing request from the image

forming apparatus **100a** while the image forming apparatus **100a** and the image forming apparatus **100b** are having a call session through a SIP connection, the print/call session controlling section of the image forming apparatus **100b** (the controlling section **101**) requests the image forming apparatus **100a** to transmit image data and prints the image data received from the image forming apparatus **100a**, while keeping the SIP connection established (without disconnecting the SIP connection).

More specifically, the image forming apparatus **100a** on the transmission side performs the following process: First, when the user instructs via the operating panel **104** that the web screen **500** should be displayed, information (a display request) indicating that the instruction was issued is sent to the operating panel processing section **105**, and the display request is further sent from the operating panel processing section **105** to the controlling section **101**. When having received the display request, the controlling section **101** activates the web screen processing section **101a**. After that, as a result of activating the web screen processing section **101a**, a print requesting process during a call session is performed. The print requesting process during a call session is performed by, for example, executing the application (the web application) in the web server **300** via the web screen **500**. The print requesting process during a call session performed by the image forming apparatus **100a** on the transmission side will be explained below, primarily with reference to FIG. 4.

During the print requesting process mentioned above, first at step **S201**, by using an “HTTP get”, the web screen processing section **101a** requests the web server **300** to transmit the web screen **500**. When having received the request, the web server **300** transmits the web screen **500** to the web screen processing section **101a** of the image forming apparatus **100a**.

After that, at step **S202**, the web screen processing section **101a** receives the web screen **500** from the web server **300** and causes the operating panel **104** to display the received web screen **500**. Further, the web screen processing section **101a** stores the received information about the web screen **500** into the first storing area **102a** of the auxiliary storage section **102**.

Subsequently, at step **S203**, the user operates (touches) the transmission-side web screen **500**, so that call control according to SIP is exercised on the image forming apparatus **100b** on the reception side. When the call control is exercised, the image forming apparatus **100b** (the controlling section **101**) on the reception side obtains the IP address of the image forming apparatus **100a**. Subsequently, at step **S204**, the image forming apparatus **100b** (the controlling section **101**) on the reception side transmits “OK” to the image forming apparatus **100a**, as a response to the call control. As a result, a SIP connection is established, and the SIP terminals (the image forming apparatuses **100a** and **100b**) are thus able to perform peer-to-peer communication with each other through the SIP connection.

After that, at step **S205**, by using an “HTTP get”, the image forming apparatus **100b** (the controlling section **101**) on the reception side requests the image forming apparatus **100a** to transmit the web screen **500**.

After that, at step **S206**, the image forming apparatus **100a** transmits the information about the web screen **500** stored in the first storing area **102a** of the auxiliary storage section **102** to the image forming apparatus **100b** on the reception side. When having received the information about the web screen **500**, the image forming apparatus **100b** causes the operating panel **104** to display the web screen **500** on the basis of the received information.

Subsequently, the image forming apparatus **100a** and the image forming apparatus **100b** have a call session with each other through the SIP connection. During the call session, the image forming apparatus **100b** receives audio data transmitted from the image forming apparatus **100a** (step **S207**), whereas the image forming apparatus **100a** receives audio data transmitted from the image forming apparatus **100b** (step **S208**).

After that, at step **S209**, the user operates (touches) the transmission-side web screen **500**, so as to take out desired image data (image data to be printed) from the second storing area **102b** of the auxiliary storage section **102** and to store the image data into a transmission box used in the web application (e.g., a predetermined storage area in the image forming apparatus **100a** or a predetermined storage area in the web server **300**).

After that, at step **S210**, the user operates (touches) the transmission-side web screen **500**, so that the controlling section **101** executes the web application and requests, by using an HTTP post command (hereinafter, “HTTP post”), the image forming apparatus **100b** to print the image data. In the example illustrated in FIG. 4, the “HTTP post” corresponds to the printing request.

Next, a printing process performed by the image forming apparatus **100b** on the reception side will be explained, primarily with reference to FIG. 4. The image forming apparatus **100b** performs the printing process described below, in response to the printing request described above (more specifically, the “HTTP post”), during the call session (without disconnecting the SIP connection).

When having received the printing request described above, the image forming apparatus **100b** transmits “OK” to the image forming apparatus **100a** at step **S211**, as a response to the “HTTP post”.

After that, at step **S212**, by using an “HTTP get”, the image forming apparatus **100b** (the controlling section **101**) requests the image forming apparatus **100a** to transmit image data. When having received the request, the image forming apparatus **100a** transmits the image data (the specified image data) stored in the transmission box used in the web application to the image forming apparatus **100b** through the SIP connection.

When the network communicating section **109** of the image forming apparatus **100b** has received the image data, the received image data (the specified image data) is sent from the network communicating section **109** to the image printing section **110** at step **S213**. When having received the image data, the image printing section **110** prints the received image data by using the predetermined conditions.

Next, a process performed after the printing process described above will be explained, primarily with reference to FIG. 4.

The image forming apparatus **100a** and the image forming apparatus **100b** are able to keep having the call session through the SIP connection, even after the printing process described above is finished. During the call session, the image forming apparatus **100b** receives audio data transmitted from the image forming apparatus **100a** (step **S214**), whereas the image forming apparatus **100a** receives audio data transmitted from the image forming apparatus **100b** (step **S215**).

When the call session is ended, the image forming apparatuses **100a** and **100b** each perform a call control cancelling process. More specifically, at step **S216**, the image forming apparatus **100b** performs the call control cancelling process according to SIP on the image forming apparatus **100a**. Subsequently, at step **S217**, the image forming apparatus **100a** transmits “OK” to the image forming apparatus **100b**, as a

11

response to the call control cancelling process. As a result, the SIP connection is disconnected, and the peer-to-peer communication between the SIP terminals (the image forming apparatuses **100a** and **100b**) is ended.

Next, a printing request that is made while the answering machine mode is on and a process related to a printing process performed on the basis of the printing request in the image forming system **10** will be explained, primarily with reference to FIG. **5**.

For example, when the image forming apparatus **100a** requests the image forming apparatus **100b** that is set in the answering machine mode to perform a printing process, the image forming apparatus **100a** transmits image data to the image forming apparatus **100b**. After that, the image forming apparatus **100b** receives and prints the image data, after the answering machine mode is turned off. In the example illustrated in FIG. **5**, when the image forming apparatus **100b** has received a printing request from the image forming apparatus **100a** while the image forming apparatus **100b** is set in the answering machine mode, the print/call session controlling section of the image forming apparatus **100b** (the controlling section **101**) does not perform the printing process as long as the answering machine mode is on, but when the answering machine mode has been turned off, the print/call session controlling section requests the image forming apparatus **100a** to transmit the image data and prints the image data received from the image forming apparatus **100a**.

More specifically, the image forming apparatus **100a** on the transmission side performs the following process: First, when the user instructs via the operating panel **104** that the web screen **500** should be displayed, information (a display request) indicating that the instruction was issued is sent to the operating panel processing section **105**, and the display request is further sent from the operating panel processing section **105** to the controlling section **101**. When having received the display request, the controlling section **101** activates the web screen processing section **101a**. After that, as a result of activating the web screen processing section **101a**, a print requesting process while the answering machine mode is on is performed. The print requesting process while the answering machine mode is on is performed by, for example, executing the application (the web application) in the web server **300** via the web screen **500**. The print requesting process performed by the image forming apparatus **100a** on the transmission side while the answering machine mode is on will be explained below, primarily with reference to FIG. **5**.

During the print requesting process mentioned above, first at step **S301**, by using an “HTTP get”, the web screen processing section **101a** requests the web server **300** to transmit the web screen **500**. When having received the request, the web server **300** transmits the web screen **500** to the web screen processing section **101a** of the image forming apparatus **100a**.

Subsequently, at step **S302**, the web screen processing section **101a** receives the web screen **500** from the web server **300** and causes the operating panel **104** to display the received web screen **500**.

After that, at step **S303**, the user operates (touches) the transmission-side web screen **500**, so as to take out desired image data (image data to be printed) from the second storing area **102b** of the auxiliary storage section **102** and to store the image data into a transmission box used in the web application (e.g., a predetermined storage area in the image forming apparatus **100a** or a predetermined storage area in the web server **300**).

Subsequently, at step **S304**, the user operates (touches) the transmission-side web screen **500**, so that call control accord-

12

ing to SIP is exercised on the image forming apparatus **100b** on the reception side. In the example illustrated in FIG. **5**, the call control corresponds to the printing request.

Next, a printing process performed by the image forming apparatus **100b** on the reception side will be explained, primarily with reference to FIG. **5**. The image forming apparatus **100b** performs the printing process described below, in response to the printing request (more specifically, the call control) described above.

When the call control according to SIP described above is exercised, the image forming apparatus **100b** (the controlling section **101**) obtains the IP address of the image forming apparatus **100a** on the transmission side. Subsequently, at step **S305**, the image forming apparatus **100b** (the controlling section **101**) transmits an “answering-machine-mode notice” to the image forming apparatus **100a**, as a response to the call control. As a result, a SIP connection is established, and the SIP terminals (the image forming apparatuses **100a** and **100b**) are thus able to perform peer-to-peer communication with each other through the SIP connection.

After the image forming apparatus **100b** has transmitted the “answering-machine-mode notice” to the image forming apparatus **100a**, the image forming apparatuses **100a** and **100b** each perform a call control cancelling process. More specifically, the image forming apparatus **100a** performs the call control cancelling process according to SIP on the image forming apparatus **100b** (step **S306**). The image forming apparatus **100b** transmits “OK” to the image forming apparatus **100a**, as a response to the call control cancelling process (step **S307**). As a result, the SIP connection is disconnected, and the peer-to-peer communication between the SIP terminals (the image forming apparatuses **100a** and **100b**) is ended.

After that, when the answering machine mode has been turned off in the image forming apparatus **100b**, the image forming apparatus **100b** exercises call control according to SIP on the image forming apparatus **100a** on the transmission side at step **S308**.

When the call control according to SIP described above is exercised, the image forming apparatus **100a** (the controlling section **101**) transmits “OK” to the image forming apparatus **100b** at step **S309**, as a response to the call control. As a result, a SIP connection is established, and the SIP terminals (the image forming apparatuses **100a** and **100b**) are thus able to perform peer-to-peer communication with each other through the SIP connection.

Subsequently, at step **S310**, by using an “HTTP get”, the image forming apparatus **100b** (the controlling section **101**) requests the image forming apparatus **100a** to transmit image data. When having received the request, the image forming apparatus **100a** on the transmission side transmits the image data (the specified image data) stored in the transmission box used in the web application to the image forming apparatus **100b** through the SIP connection.

When the network communicating section **109** of the image forming apparatus **100b** has received the image data, the received image data (the specified image data) is sent from the network communicating section **109** to the image printing section **110** at step **S311**. When having received the image data, the image printing section **110** prints the received image data by using the predetermined conditions.

Next, a process performed after the printing process described above will be explained, primarily with reference to FIG. **5**.

When the printing process described above has finished, the image forming apparatuses **100a** and **100b** each perform a call control cancelling process. More specifically, at step **S312**, the image forming apparatus **100b** performs the call

13

control cancelling process according to SIP on the image forming apparatus 100a. Subsequently, at step S313, the image forming apparatus 100a transmits "OK" to the image forming apparatus 100b, as a response to the call control cancelling process. As a result, the SIP connection is disconnected, and the peer-to-peer communication between the SIP terminals (the image forming apparatuses 100a and 100b) is ended.

The manner in which the printing process and the call session are controlled when the image forming apparatus 100b has received a printing request from the image forming apparatus 100a while the image forming apparatus 100b is set in the answering machine mode is not limited to the manner illustrated in FIG. 5. For example, when having received only a printing request from the image forming apparatus 100a between a printing request and a call session request, the print/call session controlling section of the image forming apparatus 100b (the controlling section 101) may, in response to the printing request from the image forming apparatus 100a, request the image forming apparatus 100a to transmit image data and may print the image data received from the image forming apparatus 100a in the same manner as illustrated in FIG. 3, even if the image forming apparatus 100b is set in the answering machine mode.

Next, a printing request and a call session request that are made while the answering machine mode is on and processes related to a printing process and an audio playback process performed on the basis of the requests in the image forming system 10 will be explained, primarily with reference to FIG. 6.

For example, when the image forming apparatus 100a requests the image forming apparatus 100b that is set in the answering machine mode to perform a printing process and to have a call session, the image forming apparatus 100a transmits image data and audio data to the image forming apparatus 100b. After that, the image forming apparatus 100b receives and prints the image data and receives and plays back the audio data, after the answering machine mode is turned off. In the example illustrated in FIG. 6, when the image forming apparatus 100b has received both a printing request and a call session request from the image forming apparatus 100a while the image forming apparatus 100b is set in the answering machine mode, the print/call session controlling section of the image forming apparatus 100b (the controlling section 101) neither performs the printing process nor has the call session as long as the answering machine mode is on, but when the answering machine mode has been turned off, the print/call session controlling section requests the image forming apparatus 100a to transmit the image data and the audio data, prints the image data received from the image forming apparatus 100a, and plays back the audio data received from the image forming apparatus 100a. The audio data is generated (i.e., the audio is recorded) when the image forming apparatus 100a has received the answering-machine-mode notice, according to an instruction received by the audio processing section 108 from the audio recording controlling section of the image forming apparatus 100a (the controlling section 101).

More specifically, the image forming apparatus 100a on the transmission side performs the following process: First, when the user instructs via the operating panel 104 that the web screen 500 should be displayed, information (a display request) indicating that the instruction was issued is sent to the operating panel processing section 105, and the display request is further sent from the operating panel processing section 105 to the controlling section 101. When having received the display request, the controlling section 101 acti-

14

vates the web screen processing section 101a. After that, as a result of activating the web screen processing section 101a, a print requesting process and a call session requesting process that are performed while the answering machine mode is on are started. The print requesting process and the call session requesting process that are performed while the answering machine mode is on are performed by, for example, the web application in the web server 300 via the web screen 500. The print requesting process and the call session requesting process that are performed by the image forming apparatus 100a on the transmission side while the answering machine mode is on will be explained below, primarily with reference to FIG. 6.

During the print requesting process mentioned above, first at step S401, by using an "HTTP get", the web screen processing section 101a requests the web server 300 to transmit the web screen 500. When having received the request, the web server 300 transmits the web screen 500 to the web screen processing section 101a of the image forming apparatus 100a.

After that, at step S402, the web screen processing section 101a receives the web screen 500 from the web server 300 and causes the operating panel 104 to display the received web screen 500.

Subsequently, at step S403, the user operates (touches) the transmission-side web screen 500, so as to take out desired image data (image data to be printed) from the second storing area 102b of the auxiliary storage section 102 and to store the image data into a transmission box used in the web application (e.g., a predetermined storage area in the image forming apparatus 100a or a predetermined storage area in the web server 300).

After that, at step S404, the user operates (touches) the transmission-side web screen 500, so that call control according to SIP is exercised on the image forming apparatus 100b on the reception side. When the call control is exercised, the image forming apparatus 100b (the controlling section 101) on the reception side obtains the IP address of the image forming apparatus 100a. Subsequently, at step S405, the image forming apparatus 100b (the controlling section 101) on the reception side transmits an "answering-machine-mode notice" to the image forming apparatus 100a, as a response to the call control. As a result, a SIP connection is established, and the SIP terminals (the image forming apparatuses 100a and 100b) are thus able to perform peer-to-peer communication with each other through the SIP connection.

When having received the "answering-machine-mode notice", the image forming apparatus 100a receives an input of audio for a predetermined period of time. When a user has input a message thereto during the period of time, the message is recorded, so that the recorded message (audio data) is stored into the third storing area 102c. After that, at step S406, the image forming apparatus 100a takes out the audio data (the user's message) from the third storing area 102c of the auxiliary storage section 102 and stores the audio data into a transmission box used in the web application (e.g., a predetermined storage area in the image forming apparatus 100a or a predetermined storage area in the web server 300).

Subsequently, at step S407, the user operates (touches) the transmission-side web screen 500, so as to instruct a printing process and a call session, information (a printing request and a call session request) indicating that the instruction was issued is transmitted from the image forming apparatus 100a to the image forming apparatus 100b (the web screen processing section 101a). The image forming apparatus 100b that is set in the answering machine mode stores information (a received-call history) indicating that the printing request

15

and the call session request were made, into the fourth storing area **102d** of the auxiliary storage section **102**.

Next, a printing process and an audio playback process performed by the image forming apparatus **100b** on the reception side will be explained, primarily with reference to FIG. 6. In response to the printing request and the call session request described above, the image forming apparatus **100b** performs a printing process and an audio playback process described below.

After the image forming apparatus **100a** has transmitted the printing request and the call session request to the image forming apparatus **100b**, the image forming apparatus **100a** and the image forming apparatus **100b** each perform a call control cancelling process. More specifically, at step **S408**, the image forming apparatus **100a** performs the call control cancelling process according to SIP on the image forming apparatus **100b**. At step **S409**, the image forming apparatus **100b** transmits "OK" to the image forming apparatus **100a**, as a response to the call control cancelling process. As a result, the SIP connection is disconnected, and the peer-to-peer communication between the SIP terminals (the image forming apparatuses **100a** and **100b**) is ended.

After that, when the answering machine mode has been turned off in the image forming apparatus **100b**, the image forming apparatus **100b** exercises call control according to SIP on the image forming apparatus **100a** on the transmission side at step **S410**. When the call control is exercised, the image forming apparatus **100a** (the controlling section **101**) on the transmission side transmits "OK" to the image forming apparatus **100b** at step **S411**, as a response to the call control. As a result, a SIP connection is established, and the SIP terminals (the image forming apparatuses **100a** and **100b**) are thus able to perform peer-to-peer communication with each other through the SIP connection.

After that, at step **S412**, by using an "HTTP get", the image forming apparatus **100b** requests the image forming apparatus **100a** to transmit the web screen **500**.

Subsequently, at step **S413**, the image forming apparatus **100a** on the transmission side transmits the information about the web screen **500** stored in the first storing area **102a** of the auxiliary storage section **102** to the image forming apparatus **100b**. When having received the information about the web screen **500**, the image forming apparatus **100b** causes the operating panel **104** to display the web screen **500** on the basis of the received information.

After that, at step **S414**, by using an "HTTP get", the image forming apparatus **100b** (the controlling section **101**) requests the image forming apparatus **100a** to transmit image data. When having received the request, the image forming apparatus **100a** transmits the image data (the specified image data) stored in the transmission box used in the web application to the image forming apparatus **100b** through the SIP connection.

When the network communicating section **109** of the image forming apparatus **100b** has received the image data, the received image data (the specified image data) is sent from the network communicating section **109** to the image printing section **110** at step **S415**. When having received the image data, the image printing section **110** prints the received image data by using the predetermined conditions.

After that, at step **S416**, by using an "HTTP get", the image forming apparatus **100b** (the controlling section **101**) requests the image forming apparatus **100a** to transmit audio data. When having received the request, the image forming apparatus **100a** transmits the audio data (the user's message)

16

stored in the transmission box used in the web application to the image forming apparatus **100b** through the SIP connection.

When the network communicating section **109** of the image forming apparatus **100b** has received the audio data, the received audio data (the user's message) is sent from the network communicating section **109** to the audio processing section **108** at step **S417**. When having received the audio data, the audio processing section **108** plays back the audio data.

Next, a process performed after the printing process and the audio playback process described above will be explained, primarily with reference to FIG. 6.

When the printing process and the audio playback process described above have finished, the image forming apparatus **100a** and the image forming apparatus **100b** each perform a call control cancelling process. More specifically, at step **S418**, the image forming apparatus **100b** performs the call control cancelling process according to SIP on the image forming apparatus **100a**. Subsequently, at step **S419**, the image forming apparatus **100a** transmits "OK" to the image forming apparatus **100b** as a response to the call control cancelling process. As a result, the SIP connection is disconnected, and the peer-to-peer communication between the SIP terminals (the image forming apparatuses **100a** and **100b**) is ended.

As explained above, the image forming apparatus **100** according to the present embodiment is configured to be able to cause the operating panel **104** to display the web screen **500** provided by the web server **300** that is determined in advance. Thus, the user is able to perform the operations to transmit the image data and to transmit the audio data by using the web screen **500**.

Further, in the image forming system **10** according to the present embodiment, the image forming apparatus **100** on the reception side (e.g., the image forming apparatus **100b**) is able to obtain the information about the web screen **500** from the image forming apparatus **100** on the transmission side (e.g., the image forming apparatus **100a**). Thus, the image forming apparatus **100** on the transmission side and the image forming apparatus **100** on the reception side are able to cause the respective operating panel **104** thereof to display mutually the same web screen **500**. The user is therefore able to perform the operations to receive the image data and to receive the audio data by using the web screen **500**.

As explained above, by using the web screen **500** provided by the web server **300**, it is possible to transmit/receive the image data and to transmit/receive the audio data through one connection, without having to install any specific application into the image forming apparatuses **100**. Thus, the image forming apparatuses **100** according to the present embodiment are able to transmit/receive the image data even during a call session. Further, when establishing the SIP connection, because the image forming apparatus **100** on the transmission side and the image forming apparatus **100** on the reception side are able to recognize the IP address of each other, protocols such as T.38, RTP, HTTP, and FTP become usable. Further, by using SIP, it is possible to transmit/receive the image data even during a call session, without having to install any gateway apparatus. It is therefore possible to reduce the costs.

When the image forming apparatus **100** on the reception side is set in the answering machine mode, the audio data and the image data are stored into the image forming apparatus **100** on the transmission side. The stored audio data and image data can be transmitted to the image forming apparatus **100** on the reception side at an arbitrary time when the answering

17

machine mode is turned off. By storing the audio data to be played back and the image data to be printed into the image forming apparatus **100** on the transmission side, it is possible to suppress memory consumption of the image forming apparatus **100** on the reception side, which frequently performs the receiving process.

The present disclosure is not limited to the embodiments described above. For example, the present disclosure may be carried out with any of the modifications described below.

The functions in the embodiments described above that are related to controlling the image forming apparatuses **100** may be realized by hardware (an electronic circuit or the like) or by software (e.g., a program). The program executed by the controlling section **101** in the embodiments described above may be configured to be distributable as being stored in a computer-readable recording medium such as a Compact Disk Read-Only Memory (CD-ROM).

The image forming system **10** in the embodiments described above is explained by using the example where the two image forming apparatuses **100** transmit/receive the data between each other. However, the present disclosure is not limited to this example. The image forming apparatuses **100** described above are applicable to a situation where three or more image forming apparatuses **100** transmit/receive data to/from one another.

Each of the image forming apparatuses may be a stand-alone unit (an image forming apparatus having a single function) such as a scanner, a copier, a printer, or a facsimile or may be a multifunction peripheral (an image forming apparatus having multiple functions) that has functions of a scanner/copier/printer/facsimile, for example. Further, each of the image forming apparatuses does not necessarily have to be a stationary image forming apparatus and may be a small-sized portable image forming apparatus. Further, the image transmitting apparatus (the apparatus on the transmission side) does not necessarily have to be an image forming apparatus and may be a portable terminal (e.g., a portable telephone) that is not configured to form images. The image transmitting apparatus may be a portable terminal that has a SIP communication function and is capable of transmitting image data and recording audio. The image forming system may be a system in which a portable terminal (an image transmitting apparatus) transmits image data to a stationary image forming apparatus.

In the embodiments described above, it is possible to arbitrarily modify or omit any of the configurations (the constituent elements, the dimension, the materials, the shapes, the positional arrangements, and the like) of the image forming system **10**, as long as the modifications and/or the omissions do not depart from the gist of the present disclosure.

It is possible to arbitrarily combine any of the embodiments, the modification examples, and the like. It is desirable that an appropriate combination be selected in accordance with certain usages or the like.

What is claimed is:

1. An image forming apparatus comprising:

a SIP controlling section configured to establish a connection with another image forming apparatus on a reception side, by communicating with a SIP server;

a web screen obtaining section configured to obtain information about a web screen by making a request to a web server, the web screen being used for receiving an operation to execute an application in the web server;

a display device configured to display the web screen;

a first web controlling section configured to execute the application on a basis of the operation performed on the web screen displayed by the display device and to trans-

18

mit/receive image data to/from the image forming apparatus on the reception side through the connection;

a second web controlling section configured to execute the application on the basis of the operation performed on the web screen displayed by the display device and to transmit/receive audio data to/from the image forming apparatus on the reception side through the connection; and

a print/call session controlling section that is configured to request the image forming apparatus on the reception side to perform a printing process and to have a call session, is configured to convert audio into predetermined audio data and to record the audio data when having received an answering-machine-mode notice from the image forming apparatus on the reception side, and is configured to transmit image data to be printed and the audio data to the image forming apparatus on the reception side when having received a transmission request from the image forming apparatus on the reception side.

2. An image forming apparatus according to claim 1, wherein

the SIP controlling section establishes the connection by executing the application on the basis of the operation performed on the web screen displayed by the display device.

3. An image forming apparatus according to claim 1, comprising:

a web screen transmitting section configured to transmit the information about the web screen obtained from the web server to the image forming apparatus on the reception side.

4. An image forming system comprising an image transmitting apparatus, an image forming apparatus, a SIP server, and a web server, wherein

the SIP server includes a connection establishing section configured to establish a connection between the image transmitting apparatus and the image forming apparatus, the web server includes:

an image transmitting/receiving section configured to transmit/receive image data through the connection; and

an audio transmitting/receiving section configured to transmit/receive audio data through the connection, and

the image transmitting apparatus includes:

a SIP controlling section configured to establish the connection by giving an instruction to the connection establishing section;

a first web controlling section configured to transmit the image data to the image forming apparatus by giving an instruction to the image transmitting/receiving section;

a second web controlling section configured to transmit the audio data to the image forming apparatus by giving an instruction to the audio transmitting/receiving section;

a print requesting section configured to request the image forming apparatus to perform a printing process; and

a call session requesting section configured to request the image forming apparatus to have a call session, and

the image forming apparatus includes:

an answering-machine-mode setting section configured to turn an answering machine mode on;



19

an answering-machine-mode notifying section configured to transmit an answering-machine-mode notice to the image transmitting apparatus, when having received the call session request from the image transmitting apparatus while the answering machine mode is on; and

a print/call session controlling section configured to request the image transmitting apparatus to transmit the image data and configured to print the image data received from the image transmitting apparatus, when having received only the printing process request from the image transmitting apparatus between the printing process request and the call session request, while the answering machine mode is on.

5. An image forming system according to claim 4, wherein the web server further includes a web screen transmitting section configured to transmit information about a web screen to the image transmitting apparatus, the web screen being used for receiving an operation to give an instruction to the image transmitting/receiving section and to the audio transmitting/receiving section, the image transmitting apparatus further includes a display device configured to display the web screen, the first web controlling section gives the instruction to the image transmitting/receiving section on a basis of the operation performed on the web screen displayed by the display device, and

the second web controlling section gives the instruction to the image transmitting/receiving section on the basis of the operation performed on the web screen displayed by the display device.

6. An image forming system according to claim 5, wherein the SIP controlling section gives the instruction to the connection establishing section on the basis of the operation performed on the web screen displayed by the display device.

7. An image forming system according to claim 5, wherein the image transmitting apparatus further includes a web screen transmitting section configured to transmit the information about the web screen received from the web server to the image forming apparatus.

8. An image forming system according to claim 7, wherein the image forming apparatus includes a display device configured to display the web screen, and the display device included in the image transmitting apparatus and the display device included in the image forming apparatus display a mutually same web screen.

9. An image forming system according to claim 4, wherein the print/call session controlling section requests the image transmitting apparatus to transmit the image data and prints the image data received from the image transmitting apparatus while keeping the connection established, when having received the printing process request from the image transmitting apparatus while having the call session with the image transmitting apparatus through the connection.

10. An image forming system comprising an image transmitting apparatus, an image forming apparatus, a SIP server, and a web server, wherein

the SIP server includes a connection establishing section configured to establish a connection between the image transmitting apparatus and the image forming apparatus, the web server includes:

an image transmitting/receiving section configured to transmit/receive image data through the connection; and

an audio transmitting/receiving section configured to transmit/receive audio data through the connection,

20

the image transmitting apparatus includes:

a SIP controlling section configured to establish the connection by giving an instruction to the connection establishing section;

a first web controlling section configured to transmit the image data to the image forming apparatus by giving an instruction to the image transmitting/receiving section;

a second web controlling section configured to transmit the audio data to the image forming apparatus by giving an instruction to the audio transmitting/receiving section;

a print requesting section configured to request the image forming apparatus to perform a printing process; and

a call session requesting section configured to request the image forming apparatus to have a call session, and

the image forming apparatus includes:

an answering-machine-mode setting section configured to turn an answering machine mode on;

an answering-machine-mode notifying section configured to transmit an answering-machine-mode notice to the image transmitting apparatus, when having received the call session request from the image transmitting apparatus while the answering machine mode is on; and

a print/call session controlling section that is configured not to perform the printing process as long as the answering machine mode is on, even when having received the printing process request from the image transmitting apparatus while the answering machine mode is on, and that is configured to request the image transmitting apparatus to transmit the image data and configured to print the image data received from the image transmitting apparatus, when the answering machine mode has been turned off.

11. An image forming system comprising an image transmitting apparatus, an image forming apparatus, a SIP server, and a web server, wherein

the SIP server includes a connection establishing section configured to establish a connection between the image transmitting apparatus and the image forming apparatus, the web server includes:

an image transmitting/receiving section configured to transmit/receive image data through the connection; and

an audio transmitting/receiving section configured to transmit/receive audio data through the connection, and

the image transmitting apparatus includes:

a SIP controlling section configured to establish the connection by giving an instruction to the connection establishing section;

a first web controlling section configured to transmit the image data to the image forming apparatus by giving an instruction to the image transmitting/receiving section;

a second web controlling section configured to transmit the audio data to the image forming apparatus by giving an instruction to the audio transmitting/receiving section;

a print requesting section configured to request the image forming apparatus to perform a printing process;

**21**

a call session requesting section configured to request the image forming apparatus to have a call session; and  
 an audio recording controlling section configured to control an operation related to recording of audio, 5  
 the image forming apparatus includes:  
 an answering-machine-mode setting section configured to turn an answering machine mode on;  
 an answering-machine-mode notifying section configured to transmit an answering-machine-mode notice 10  
 to the image transmitting apparatus, when having received the call session request from the image transmitting apparatus while the answering machine mode is on; and  
 a print/call session controlling section configured to 15  
 control printing of the image data and playing back of the audio data,  
 the audio recording controlling section performs an audio recording process when having received the answering-machine-mode notice,  
 the print/call session controlling section neither performs 20  
 the printing process nor has the call session as long as the

**22**

answering machine mode is on, even when having received both the printing process request and the call session request from the image transmitting apparatus while the answering machine mode is on, and  
 when the answering machine mode has been turned off, the print/call session controlling section requests the image transmitting apparatus to transmit the image data and the audio data, prints the image data received from the image transmitting apparatus, and plays back the audio data received from the image transmitting apparatus.  
**12.** An image forming system according to claim 4, wherein  
 the print requesting section requests the image forming apparatus to perform the printing process, when call control to establish the connection is exercised on the image forming apparatus.  
**13.** An image forming system according to claim 4, wherein  
 the image transmitting apparatus is another image forming apparatus.

\* \* \* \* \*